

Light source device

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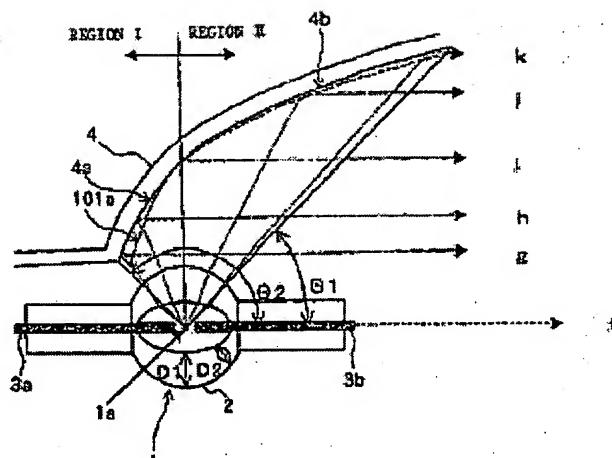
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Abstract of EP1180719

A light source device includes a discharge lamp having a tubular transparent bulb with sealed opposite ends for generating discharged light emission near a light emission center thereof, and a reflecting mirror having a reflecting surface which comprises a curved surface approximating a paraboloid whose focal point is positioned at the light emission center of the transparent bulb. The transparent bulb has a lens structure whose wall thickness is greater at the light emission center thereof than at the sealed ends thereof. The reflecting surface is divided by a boundary where a ray of light emitted from the light emission center and passing, unrefracted, through the transparent bulb is applied to the reflecting surface, into a first curved surface extending from the boundary toward an open end of the reflecting mirror and a second curved surface extending from the boundary toward a closed end of the reflecting mirror, which is remote from the open end. The second curved surface is shaped such that the angle of incidence of a ray of light emitted from the light emission center and applied to the second curved surface is progressively smaller toward the closed end, and changes of the angle of incidence are greater than changes of the angle of incidence of a ray of light on the paraboloid.

Fig. 4



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